

# (12) UK Patent Application (19) GB (11) 2 191 030 (13) A

(43) Application published 2 Dec 1987

(21) Application No 8711480

(22) Date of filing 15 May 1987

(30) Priority data

(31) 8612480

(32) 22 May 1986

(33) GB

(71) Applicant

**Bell-Fruit Manufacturing Company Limited**

(Incorporated in United Kingdom)

Leen Gate, Lenton, Nottingham NG7 2ND

(72) Inventors

**Simon Charles Melen**

**Stephen John Murray**

(74) Agent and/or Address for Service

**Barker Brettell & Duncan,**

**138 Hagley Road, Edgbaston, Birmingham B16 9PW**

(51) INT CL<sup>4</sup>

**G07F 17/34**

(52) Domestic classification (Edition I):

**G4V 118 AA**

**U1S 1174 G4V**

(56) Documents cited

**None**

(58) Field of search

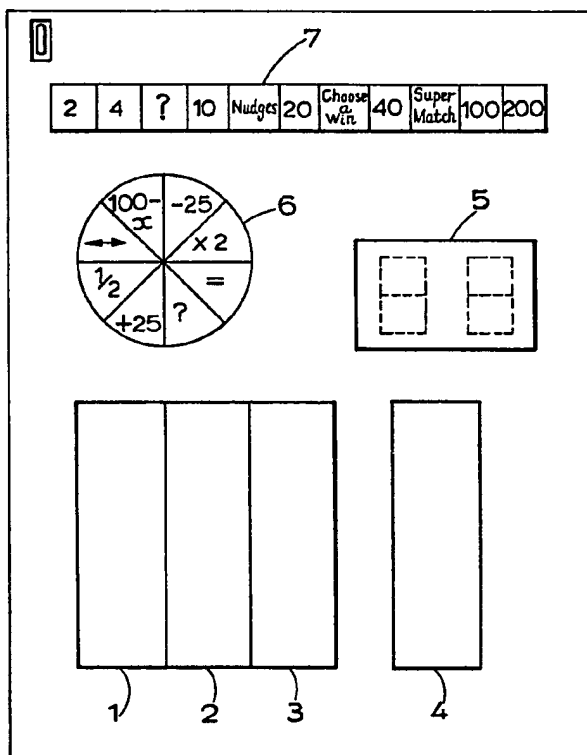
**G4V**

**Selected US specifications from IPC sub-classes A63F**

**G07F**

## (54) Gaming and amusement machines

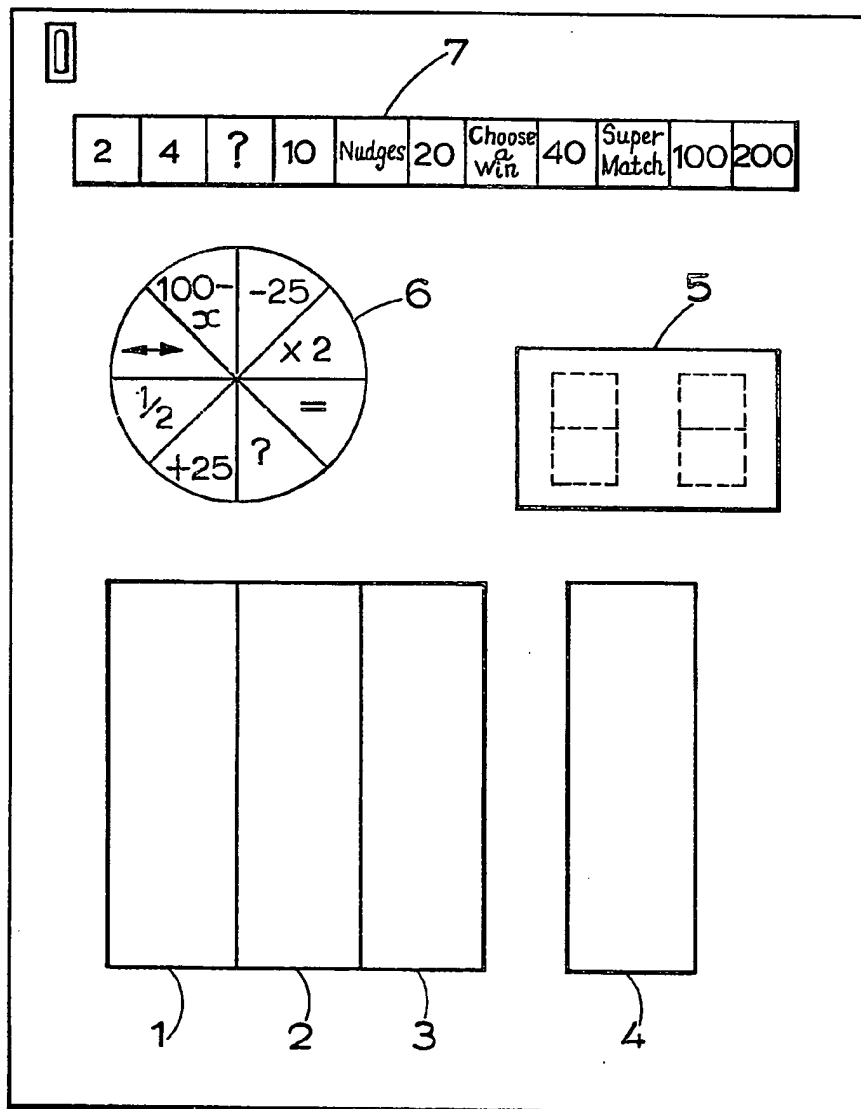
(57) In a fruit machine having three normal reels (1, 2 and 3) and a fourth reel (4) which carries numbered symbols, a special awards feature is controlled by a number count displayed on a two-digit counter (5) and which is incremented progressively every time a game is played. During the special awards feature the player is given an opportunity to spin the fourth reel (4) and each time he does so he advances one step along an award trail (7) towards a jackpot. However, the number count (5) is decremented by the figure on the fourth reel (4) which comes to a halt on the win line after each spin on the fourth reel (4) and the special awards feature is lost when the number count (5) falls below zero. The number count may also be influenced on occasions by other factors such as by arithmetical operations on a feature wheel display (6), the particular operation being determined at random or under the control of the player.



GB 2 191 030 A

1/1

2191030



## SPECIFICATION

## Gaming and amusement machines

5 This invention relates to coin-released or token-released gaming or amusement-with-prizes machines of the kind generally known as fruit machines, in which a number of reels, usually three or four, carrying symbols on their peripheries, are sent in rotation after insertion of a coin or token and when they come to a halt if the symbols on the reels in a certain position, the so-called win line, make up one of a number of predetermined combinations a prize is awarded, e.g. in the form of cash, tokens, credits, or further games. Instead of actual reels, their equivalent may be used, e.g. discs, or representations of symbols projected optically or in the form of images on a video screen. Such gaming or amusement-with-prizes machines will hereinafter be referred to as of the kind set forth.

In addition to prizes awarded on the result of the initial game there are also numerous features offered, often at random, following a non-winning game, e.g. so-called ladders, trails, and other opportunities to gain bigger prizes; it is also possible, following a winning game, to gamble the prize already won.

The aim of the invention is to provide a novel form of game of this general kind but having new features which are particularly attractive to the player. According to the invention, in a gaming or amusement-with-prizes machine of the kind set forth a special awards feature is controlled by a number count which is incremented or decremented progressively and/or at random and decremented or incremented by the amount of a figure which results from the spinning of a further reel, the opportunity to spin this further reel being awarded following a non-winning game and giving the chance of progress along the awards feature, for instance along an awards 'ladder' or 'trail' leading to a jackpot, but in the event of the number going beyond a predetermined minimum or maximum the feature is lost.

Preferably, the further reel carries symbols representing numbers, the number count is incremented when normal games are played and decremented by the number represented by the symbol on the further reel which comes to a halt on the win line after each spin of the further reel, the feature being lost when the number count falls below a predetermined minimum, conveniently zero.

Thus, when the player is given the opportunity to spin the further reel (usually a fourth reel), he wants to make use of it as many times as he can, because each time he spins it he is advanced further along the ladder or trail towards the jackpot, but at the same time every spin results in a number which decreases the number count and increases the

risk of that count going below zero and losing him the feature altogether.

It will be understood that arithmetically the above-described system could, within the scope of the principle behind the invention, be inverted, in that the number on the counter could be decremented progressively or at random, and the numbers that appear on the fourth reel are added to it rather than subtracted, and in that case the feature is lost when the number goes beyond a predetermined maximum.

It is believed that this principle of using a counter, on which the number is incremented and decremented by other factors, to control a feature, the feature being lost when the number oversteps a certain limit, is broadly new.

In one preferred example the number is a two-digit one, i.e. runs from zero to 99, and is prominently displayed on a counter. The number count may be increased or decreased progressively by a given number, such as one, every time a game is played. Alternatively or additionally the number count may be altered on certain occasions in accordance with one of a number of arithmetical operations determined either at random or under the control of the player in an additional feature.

The present invention will now be described, by way of example only, with reference to the accompanying drawing. The drawing shows a fruit machine having three reels 1, 2 and 3 which carry fruit symbols, a fourth reel 4, a two-digit counter 5, a feature wheel display 6 and an award trail 7.

During play on the fruit machine ordinary games may be played either on the first three reels 1, 2 and 3 or, when the fourth reel 4 carries fruit symbols, on all four reels. Regardless of whether or not the fourth reel 4 takes part in an ordinary game it carries numbered symbols, for instance figures superimposed on fruit symbols or figures by themselves.

The two-digit counter 5 may, for instance, comprise a numeric liquid crystal display which can display any number between zero and 99. Every time a game is played on the machine the number displayed on the counter 5 is progressively increased by one up to a maximum of 99. The number displayed on the counter 5 may also be influenced at random by other factors. For example, in one typical case, every time a cherry symbol lands on the win line in an ordinary game it is arranged to reverse the digits displayed on the counter (e.g. if the number displayed was 19, it becomes 91). It will be apparent that the possibilities on these lines are endless.

Another such possibility involves the feature wheel display 6 on the display panel. A ring of boxes containing instructions for different arithmetical operations to be performed on the number on the counter is made available on certain occasions and the different boxes flash

at random. When the flashing stops the instruction in that box is performed. The instructions may, for example, be to double the number on the counter or to halve it, to subtract it from 100, to reverse its digits, or to add or subtract a certain fixed amount. The player may be given some degree of control over the wheel feature, by having a stop button by which he can try to bring the flashing to stop on the particular arithmetical instruction that suits his purpose.

This wheel feature may be made available at random following a non-winning game, or when a special symbol on one of the normal reels 1, 2 and 3 comes to a halt on the win line.

When the special awards feature of the invention becomes available, for example randomly at the end of a non-winning game or on completion of a 'fruit ladder' or 'numbers trail', the player is given an opportunity to spin the fourth reel 4 on its own for as many times as he likes with the aim of advancing as far as possible along the award trail 7 without losing the feature. The award trail 7 may be of a known kind and in the example shown in the drawing it has eleven steps with prize awards increasing from a small award at one end to a jackpot at the other end. The prize awards may be cash awards, tokens, credits or feature awards leading to further prizes, for instance 'nudges' or 'choose-a-win' features.

During the special feature, each time the player spins the fourth reel 4 he advances one step along the award trail 7 to an increased award. However every time the reel 4 is spun, the figure appearing on the win line when it comes to a halt is deducted from the figure appearing on the counter and as soon as that figure goes below a predetermined minimum, zero, the feature is lost altogether and the player either loses everything or is awarded a minimum consolation award such as two credits.

Thus when the player is playing the special feature he must decide either to collect the award he has reached on the award trail 7 or to spin the fourth reel 4 another time in the hope of advancing along the award trail 7 but with a risk of losing the feature and the award already gained. The special feature therefore increases the attractiveness of the machine to a player.

It will be understood that during the special feature other symbols on the fourth reel 4 apart from numbers may also be used to manipulate the figure on the counter to the advantage or disadvantage of the player. For instance, the wheel feature described above may come into operation during the special feature when a special symbol on the fourth reel 4 comes to a halt on the win line. All the time during the special feature, the player is endeavouring to advance along the trail to reach a jackpot but the more use he makes of

the fourth reel spins to do this the more he risks pushing the value of the number displayed beyond the limit at which he loses everything (the limit being zero in the example described).

## CLAIMS

1. A coin-released or token-released gaming or amusement-with-prizes machine of the kind set forth in which a special awards feature is controlled by a number count which is incremented or decremented progressively and/or at random and decremented or incremented by the amount of a figure which results from the spinning of a further reel, the opportunity to spin the further reel being awarded following a non-winning game and giving the chance of progress along the awards feature, but in the event of the number going beyond a predetermined minimum or maximum the feature is lost.

2. A gaming or amusement-with-prizes machine as claimed in claim 1 in which the further reel carries symbols representing numbers, the number count is incremented when normal games are played and decremented by the number represented by the symbol on the further reel which comes to a halt on the win line after each spin of the further reel, the feature being lost when the number count falls below a predetermined minimum.

3. A gaming or amusement-with-prizes machine as claimed in claim 2 in which the predetermined minimum is zero.

4. A gaming or amusement-with-prizes machine as claimed in any of the preceding claims in which the number count is displayed on a two-digit counter.

5. A gaming or amusement-with-prizes machine as claimed in any of the preceding claims in which the number count is increased or decreased progressively by a given number every time a game is played.

6. A gaming or amusement-with-prizes machine as claimed in any of the preceding claims including an additional feature by means of which the number count is altered on certain occasions in accordance with one of a number of arithmetical operations determined either at random or at least partly under the control of the player.

7. A gaming or amusement-with-prizes machine as claimed in claim 6 in which the additional feature is made available at random following a non-winning game.

8. A gaming or amusement-with-prizes machine as claimed in claim 6 in which the additional feature is made available when a special symbol on one of the normal reels or on the further reel comes to a halt on the win line.

9. A gaming or amusement-with-prizes machine as claimed in any of the preceding claims in which after each spin of the further reel during the special awards feature, the player advances along an award ladder or trail

leading to a jackpot, provided that the number has not gone beyond the predetermined minimum or maximum.

10. A gaming or amusement-with-prizes  
5 machine substantially as described herein with reference to the accompanying drawing.

---

Printed for Her Majesty's Stationery Office  
by Burgess & Son (Abingdon) Ltd, Dd 8991685, 1987.  
Published at The Patent Office, 25 Southampton Buildings,  
London, WC2A 1AY, from which copies may be obtained.

# (12) UK Patent Application (19) GB (11) 2 230 373 (13) A

(43) Date of A publication 17.10.1990

(21) Application No 9005071.7

(22) Date of filing 07.03.1990

(30) Priority data

(31) 8906223

(32) 17.03.1989

(33) GB

(71) Applicant

**Bell-Fruit Manufacturing Company Limited**

(Incorporated in the United Kingdom)

**Leen Gate, Lenton, Nottingham,  
NG7 2ND, United Kingdom**

(72) Inventor

**Michael Thomas Lee**

(74) Agent and/or Address for Service

**Barker Brettell & Duncan**

**138 Hagley Road, Edgbaston, Birmingham  
B16 9PW, United Kingdom**

(51) INT CL<sup>a</sup>

**G07F 17/34**

(52) UK CL (Edition K)

**G4V VAA V118**

(56) Documents cited

**GB 2222712 A**

**GB 2210191 A**

**GB 2161009 A**

**GB 2152262 A**

**GB 2147442 A**

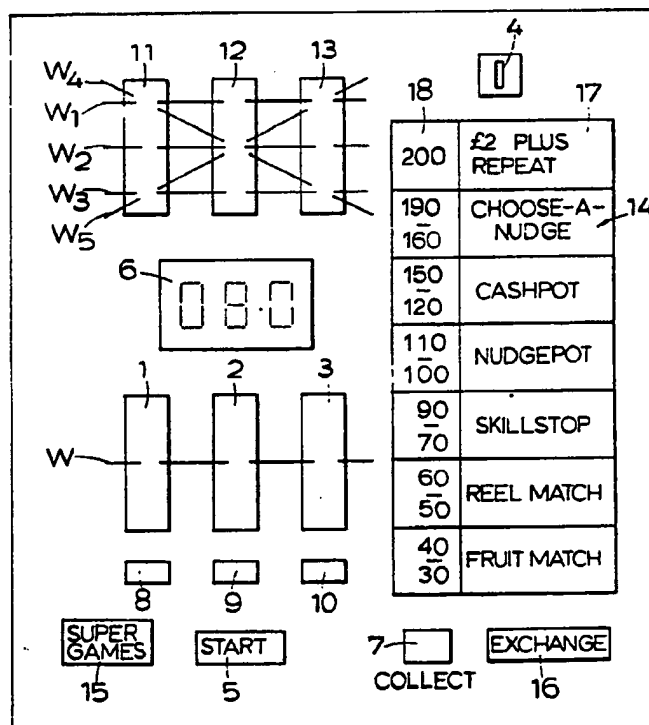
(58) Field of search

**UK CL (Edition J) G4V VAA**

**INT CL<sup>a</sup> A63F, G07F 17/34**

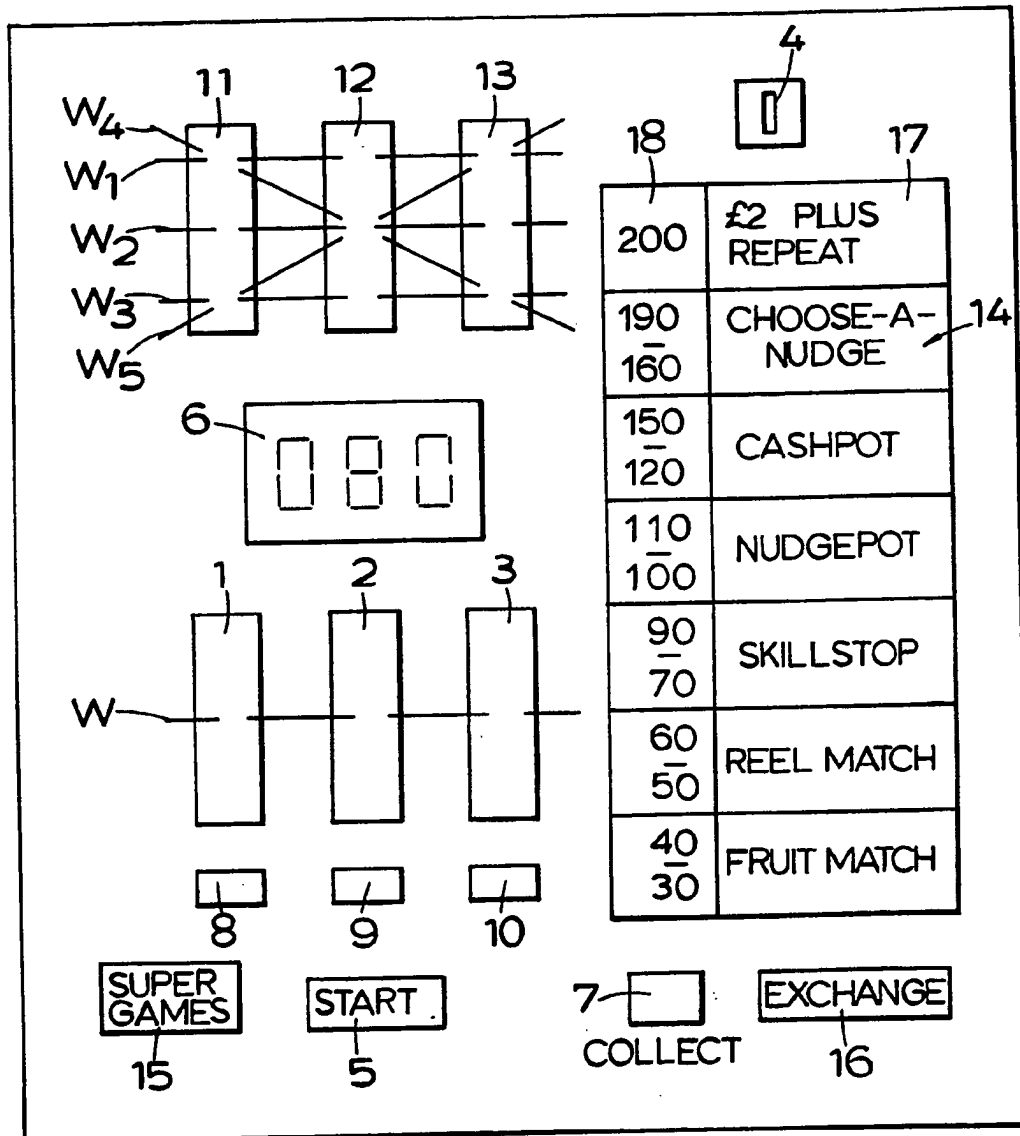
(54) Gaming and amusement machines

(57) A gaming machine, particularly a fruit machine is operated to provide a combination of symbols on reels (1-3), certain combinations resulting in the award of a credit which is stored in a credit meter (6). A predetermined number of credits accumulated over a number of games may be exchanged for a special feature, or one of a plurality of special features selected from a display panel (14). Alternatively, the machine may be provided with a second set of reels (11-13) on which a "super game" can be played when a predetermined number of credits are stored in the credit meter.



GB 2 230 373 A

1/1



GAMING AND AMUSEMENT MACHINES

This invention relates to gaming or amusement-with-prizes machines of the kind generally known as 'fruit machines', in which three, or sometimes more, reels carrying symbols are set in rotation and then stop in turn at random intervals and if the resulting combination of symbols on the three (or more) reels appearing on a given line in the display, the 'win line', is one which has been designated a winning combination, the player receives an award or a credit. Instead of actual reels, it is known to use other forms of display which simulate rotating reels to a greater or lesser degree, for example the Panascope, or a video screen on which images of the symbols appear. Such machines will hereinafter be referred to as of the kind set forth.

Many special features are provided nowadays in fruit machines, indeed they have to some extent taken over from the basic game, in that most of the bigger wins are obtained by the special features rather than by the initial result when the reels first come to a halt. The special features may be awarded at random intervals following non-winning games on the reels, but more commonly these days they are awarded following completion of a so-called 'ladder' or 'trail' feature in which steps in the ladder or trail may be illuminated as a result of certain symbols, e.g. symbols bearing superimposed numbers, appearing on the win line. When the 'ladder' or 'trail' is completed, a jackpot prize or another special feature which may result in a jackpot prize may be awarded.

Often a plurality of special features may be provided on a fruit machine with some features offering



a greater chance to win a higher prize than other features. The plurality of special features may also be arranged in a 'feature ladder' or 'trail' and when the player is awarded one special feature he may be given the opportunity to gamble between either gaining another special feature higher up on the feature ladder or trail or losing the special feature altogether.

Amongst the many special features which are provided nowadays in fruit machines, one which has proved popular is the so-called 'nudge' feature, by which the player is sometimes given the opportunity at the end of a game which did not result in a win, to advance one or more of the reels by a single step, or a sometimes more than one step, to bring a fresh symbol onto the win line and thereby change what was a losing combination into a winning one. This feature may be offered apparently at random after a non-winning game, or a number of 'nudges' determined in one of a variety of ways may be awarded as a special feature after completion of a 'ladder' or 'trail'.

It is also known to provide an 'exchange feature' in which a 'feature ladder' is disposed alongside a column indicating the different prize values achievable when different winning combinations of symbols come to rest on the win line and on certain occasions the player may be offered the chance to exchange a prize awarded from a single game on the reels for the equivalent feature corresponding to that prize value. For example, a 20p prize may be equivalent to 2 nudges in the feature ladder, a 40p prize may be equivalent to 4 nudges in the feature ladder, and so on.

It is an aim of the invention is to provide a different and particularly attractive way of making a

special feature or a plurality of special features available to the player.

According to the present invention there is provided a gaming or amusement-with-prizes machine of the kind set forth in which credits are awarded when winning combinations of symbols on the reels appear on a 'win line' of the display, the credits being stored in a credit meter, and means are provided which enable the player to exchange a predetermined number of credits accumulated in the credit meter over a plurality of games for a special feature or one of a plurality of special features.

It is generally envisaged that the player will be given the choice either to collect a prize, generally in the form of cash or tokens, which is equivalent to the credits that have been accumulated, or to exchange the predetermined number of credits for the special feature.

The present invention adds more variety to the basic game on the fruit machines involving the rotating reels and may give the player the chance to gain larger prizes from the special features than the prize equivalent to the predetermined number of credits.

Two or more special features may be provided which are preferably arranged on a display in an ascending order with a higher feature offering a greater chance to win a large prize than a lower feature, a greater number of predetermined credits being required to be accumulated in the credit meter for the player to be able to exchange those credits for a higher feature.

Alternatively, or additionally, a predetermined number of accumulated credits may be exchanged for one or more special feature games played on the same or a different set of reels in which there is an enhanced possibility of winning large prizes than in the standard game played on the reels. The enhanced possibility of winning large prizes may be achieved by having an increased number of win lines in the special feature game.

10

An embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawing which shows the display area of a fruit machine.

15

The display area has the usual elements which enable a game to be played on the fruit machine, namely a first set of rotatable reels 1, 2 and 3 carrying symbols behind a first set of windows, a coin and/or token entry slot 4, a 'start' button 5 which when pressed sets the reels in rotation until they stop in turn at random intervals, a credit meter 6 in the form of a 3-digit display in which credits awarded when designated winning combinations of symbols appear on a win line W in the display are stored until the player decides to collect a prize equivalent to the accumulated credits by pressing a 'collect' button 7. There may also be 'hold' or 'nudge' buttons 8, 9 and 10 associated with the first set of reels 1, 2 and 3.

30

The fruit machine illustrated in the drawing differs from conventional machines in that it has a second set of reels 11, 12 and 13 behind a second set of windows and a special feature display area 14. The machine also has a 'super games' button 15 which, when the player has accumulated a predetermined number of

35

credits in the credit meter 6 from wins over a plurality of games on the first set of reels 1, 2 and 3, allows the player to exchange those credits for one or more 'super games' on the second set of reels 11, 12 and 13. There are three horizontal win lines  $W_1$ ,  $W_2$  and  $W_3$  and two diagonal win lines  $W_4$  and  $W_5$  on the display associated with the second set of reels 11, 12 and 13 which provide an enhanced possibility of winning larger prizes from 'super games' played on the second set of reels than the chance of winning prizes from the standard game on the first set of reels 1, 2 and 3.

As an alternative to the 'super games' played on the second set of reels, when the player has accumulated a number of credits above a predetermined minimum number from wins on the first set of reels 1, 2 and 3 and/or from wins on the second set of reels 11, 12 and 13 the player may either collect a prize equivalent to that number of credits by pressing the collect button 7 or exchange those credits for an equivalent special feature displayed on the special feature display area 14 by pressing an 'exchange' button 16.

As shown in the drawing, the special feature display area 14 has a column 17 of seven special features alongside a column 18 indicating the predetermined number of credits which must be won before those credits can be exchanged for a corresponding feature. The special features are arranged in an ascending order in the feature column 17 with a higher feature in the column offering a greater chance of winning a large prize than a lower feature in the column. For example, if the maximum cash prize which can be won from a single game is £2, the top

special feature may be a £2 award with an approximately fifty-fifty chance of the feature being repeated in the following game. The other special features are preferably of the kind which are conventionally awarded following completion of a so-called 'ladder' or 'trail' on fruit machines, e.g. 'jackpot' awards of 'nudges', cash or tokens, skill features or other 'nudge' or 'fruit match' features in which there is a lower chance of achieving the maximum cash prize. As shown in the drawing greater numbers of credits must be accumulated in the credit meter to enable the player to exchange the accumulated credits for the higher special features in column 17.

It will be appreciated that several modifications may be made to the fruit machine shown in the drawings without departing from the scope of the invention. For instance, the second set of reels 11, 12 and 13 may be omitted with the special feature games or 'super games' being played on the first set of reels but with a greater number of win lines e.g. five being provided instead of the single win line W available in the standard games. In an alternative modification, win lines  $W_1$ ,  $W_3$ ,  $W_4$  and  $W_5$  may be omitted and a smaller number of different symbols provided on the second set of reels 11, 12 and 13 so that there is a greater chance of a winning combination appearing on the single win line  $W_2$  than of a winning combination appearing on win line W of the first set of reels 1, 2 and 3.

CLAIMS

- 5     1. A gaming or amusement-with-prizes machine of the  
kind set forth in which the credits are stored in a  
credit meter, and means are provided which enable a  
predetermined number of credits accumulated in the  
10     credit meter over a plurality of games to be exchanged  
for a special feature game or one of a plurality of  
special features.
- 15     2. A machine according to claim 1 in which means are  
provided which enable a predetermined number of  
accumulated credits to be exchanged either for a  
special feature or at the choice of the user, a prize  
equivalent to the accumulated credits to be collected.
- 20     3. A machine according to claim 1 or claim 2 in which  
means are provided such that larger prizes may be  
obtained from the special features than a prize  
equivalent to the predetermined number of accumulated  
credits.
- 25     4. A machine according to any previous claim in which  
at least two special features are provided, arranged on  
a display in ascending order with a higher feature  
requiring a greater predetermined number of accumulated  
credits to be exchanged than a lower feature, a higher  
30     feature offering a greater chance of gaining a larger  
prize than a lower feature.
- 35     5. A machine according to any previous claim in which  
the arrangement is such that the said special feature  
game is played on a different set of reels from the  
first-mentioned reels.

6. A machine according to claim 5 in which means are provided to increase the possibility of winning larger prizes in the special feature games than in the standard game.

5

7. A machine according to claim 6 in which the special feature games have an increased number of win-lines.

10 8. A gaming or amusement-with-prizes machine substantially as described herein with reference to and as illustrated in the accompanying drawing.

15

20

25

30

35